

**APPENDIX C**  
**SPREADSHEETS**

## REPORT FORMAT FOR SPREADSHEETS

The field data and the laboratory results are analyzed by the Hall-Kimbrell management program. The results of this analysis are presented in spreadsheet format. The spreadsheets are organized by the building numbers assigned by Hall-Kimbrell. The building number appears in the upper right hand corner for each of the specific areas which were surveyed.

Since the spreadsheet format is oriented to data only, a short explanation of each element contained therein is given below. The data is organized under fifteen column headings. The following explains the content of each column and its relationship with the other items on the page.

Area Number - This is a number which appears in Column 1 and is assigned by the data management group for reference purposes only.

Area Description - The Area Description relates (within the primary building) the room, floor, or section of a room where materials were found.

Location of Material - The Location of Material describes where in the area or room the material was observed.

Sample Number - The sample number refers to the material sampled in the area described. The one-digit multisample extension is specific to members of a multisample group. This is a set of samples which is taken from a single homogeneous source material. Sample numbers that start with 999 represent nonsampled, nonfriable material.

Percent Asbestos - Since the percent of asbestos in a sample is one of the primary factors determining the potential for exposure, it is listed separately in terms of the total percentage. A more detailed breakdown of the types and percentages of each type of asbestos found in the sample can be found in the petrographic analysis for that sample. The percent of asbestos shown for each individual sample may not reflect the actual percent of asbestos determined by our laboratory as listed in the petrographic section of this report. If a zero is present in this column, the sample contained no asbestos, and no exposure potential or cost estimates are listed in subsequent columns.

Bulk Sample Description - This column is a written identification of the material that was taken from the area, such as pipe covering, spray-applied acoustical plaster, boiler packing, etc. This, again, is used for identification purposes.

O & M Code - This column contains the operations and maintenance code for this particular material. An explanation of these codes is contained in Chapter VII.

Quantity - This is the actual quantity of the material to be used for estimating costs. The quantity is expressed in absolute units identified under the next column, Unit of Measure. Quantities have been determined by on-site measurement or plan take-offs. Where access is restricted, best estimates are determined from whatever information is available. An accuracy factor of +/- 10% can be assumed.

Unit of Measure - This column indicates the units of measurement such as linear feet, square feet, or other applicable dimensions. The size of pipe indicated reflects the nominal outside diameter of the pipe with insulation. A four inch diameter pipe would be expressed as "4 in. O.D." Pipe lagging is expressed in units of linear feet, but mudded joint packings are expressed in numbers of individual units of the indicated size. The mudded joint packing designation includes any mudded material, such as hanger connections, elbow joints and valves. All

fireproofing material is expressed in square feet of total beam and deck area, rather than square foot area of floor, and the figure has an accuracy factor of +/- 8%. All acoustical plasters and decorative plasters are, again, expressed in total surface area, which usually corresponds to floor area, and this figure has an accuracy factor of +/- 5%. Any miscellaneous material such as wall plaster, asbestos-containing debris, etc. is expressed as an approximate quantity with a +/- 30% accuracy factor.

Pipe ID - The identification of types of pipe lines, e.g. hot water supply (HWS), cold water return (CWR), low pressure steam (LPS).

Exposure Potential - The exposure potential is determined for each area where asbestos-containing materials have been found. The exposure potential differs from actual ambient exposure. Ambient exposure refers to the amount of asbestos that is inhaled on a day-to-day basis in a contaminated building. The exposure potential, on the other hand, is the possibility, expressed numerically, of the occurrence of an accidental disturbance of the material. The disturbance could be in the form of impact with the material, vibration from mechanical systems, water damage, or other causes. There are approximately 20 variables which contribute to the propensity of the material being disturbed. The exposure potential is very important in determining priority for abatement as well as the necessity for immediate implementation of control measures.

While ambient exposure is generally relatively low in public buildings, material disturbances can result in very massive doses of asbestos fibers being released into the work area and a building occupant's breathing zone for short periods of time. It has been estimated by many experts that peak exposures from accidental disturbance contribute the vast majority of asbestos fibers in a person's lungs, compared to those inhaled ambiently.

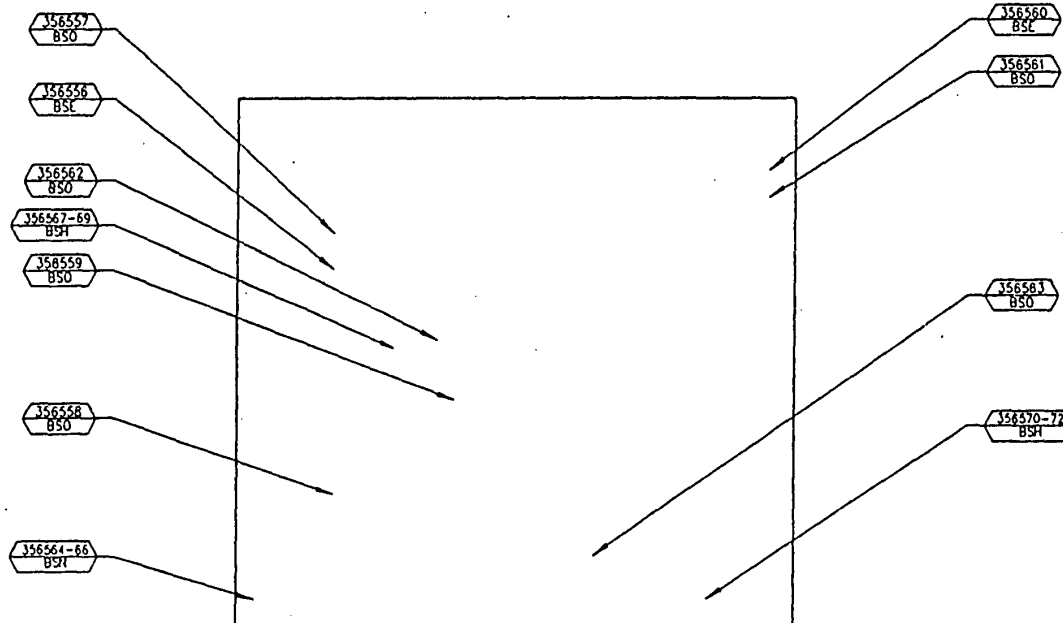
Priority Level - The exposure potentials for all buildings contained in this study have been divided into priorities, with Priority Level I posing the greatest exposure hazard. Subsequent priorities characterize areas with lower exposure potentials. Exposure potential numbers are distributed on a continuum, and the priority is based on the distribution. Priority Level I usually designates those materials which are creating a very serious exposure threat to the building occupants, as expressed by the exposure potential number as well as our subjective interpretation of the notes taken during the inspection. Although Priority Level II should be considered serious, it does not yield the degree of danger that Priority Level I does, and so on. The Priority Levels are primarily used in conjunction with a phased abatement program, where the highest priority areas are removed first and lower priorities are managed under an operations and maintenance program until they can ultimately be removed.

Removal Cost - This is the portion of the cost associated with the removal of the asbestos-containing material. This cost includes area preparation prior to abatement and cleanup and disposal of waste after abatement. The removal cost does not include the costs incurred to gain access to some of the materials which may be enclosed behind ceilings or other obstacles.

Replacement Cost - This is the cost associated with replacement of asbestos-containing materials or reinsulation of the specific item from which asbestos has been removed.

**Total Cost** - The total cost is the sum of the cost estimated for removal of the asbestos-containing materials and the cost of replacement of this material with nonasbestos products of equivalent or greater quality. Estimates are based on average unit values for the type of material and, in general, our experience in estimating the cost of asbestos abatement projects. Other variables which contribute to the cost factors are accessibility to the material, building use and occupancy, total size of the project, ceiling height, number of floors in the buildings, HVAC system, etc. The unit prices used in this estimate are based on projects in the client's respective geographical location. A subtotal appears for each exposure area. At the end of the column, the base abatement cost is totaled for that building. Engineering, air monitoring, and other related costs are not included in the base abatement cost which appears on the spreadsheets.

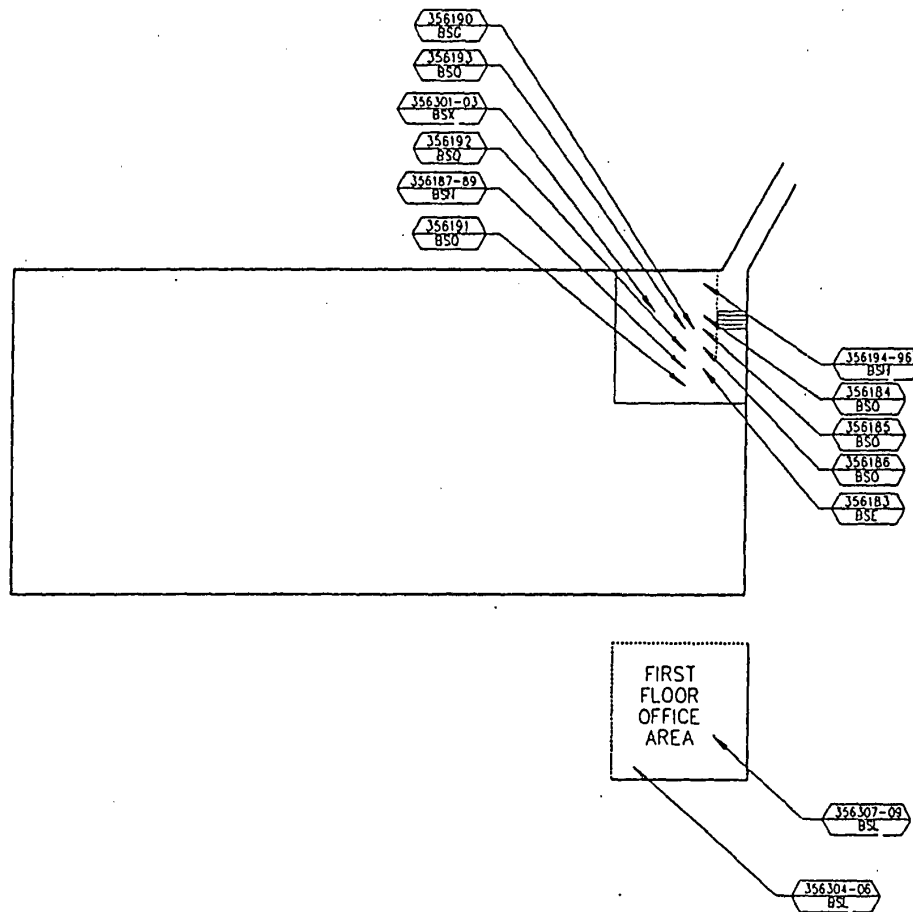
**Average Percent Asbestos** - The Average Percent Asbestos is the average percent asbestos for the area.



FIRST FLOOR



BULK SAMPLE CODE		SAMPLE IDENTIFICATION NUMBER	<b>HALL-KIMBLE</b> <small>PHOTOGRAPHY SERVICE</small> 4440 WEST FIFTEENTH STREET LAWRENCE, KANSAS 66044		<b>G. HEILEMAN BREWING COMPANY</b> ASBESTOS ASSESSMENT SURVEY
			DATE: 05/26/09	079	PROJECT NUMBER: 0980193E HEILEMAN BREWING COMPANY RAINIER BREWING COMPANY BUILDING #27 HOT WATER HOUSE



FIRST FLOOR/MEZZANINE

BULK SAMPLE CODE	174376 BSA	SAMPLE IDENTIFICATION NUMBER	NALL-KV/RELL		G. HEILEMAN BREWING COMPANY ASBESTOS ASSESSMENT SURVEY
			4840 WEST FIFTEENTH STREET LAWRENCE, KANSAS 66044		
DATE: 05/26/89			030		PROJECT NUMBER: 0980193E HEILEMAN BREWING COMPANY RAINIER BREWING COMPANY BUILDING #33

356197  
BSL

356199  
BSL

356198  
BSL

SECOND FLOOR(WOMENS BREAK ROOM)



BULK  
SAMPLE  
CODE

124378  
BSA

SAMPLE  
IDENTIFICATION  
NUMBER

HALL-TOBELL

4840 WEST FIFTEENTH STREET  
LAWRENCE, KANSAS 66044

DATE:  
05/76/89

030A

G. HEILEMAN BREWING COMPANY  
ASBESTOS ASSESSMENT SURVEY

PROJECT NUMBER: 0980193E  
HEILEMAN BREWING COMPANY  
RAINIER BREWING COMPANY  
BUILDING #33